

AU/AWC/NNN/2001-12

SCHOOL

AIR UNIVERSITY

GUIDING THE UNITED STATES GOVERNMENT RESPONSE TO
AN OVERSEAS CHEMICAL, BIOLOGICAL, RADIOLOGICAL, OR
NUCLEAR DISASTER

by

Roman N. Hrycaj, Colonel, USAF

A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

Advisor: Colonel Robert Sutton

Maxwell Air Force Base, Alabama

February 2001

Distribution A: Approved for public release; distribution is unlimited
--

Report Documentation Page

Report Date 01FEB2001	Report Type N/A	Dates Covered (from... to) -
Title and Subtitle Guiding the United States Government Response to an Overseas Chemical, Biological, Radiological, or Nuclear Disaster		Contract Number
		Grant Number
		Program Element Number
Author(s) Hrycaj, Roman N.		Project Number
		Task Number
		Work Unit Number
Performing Organization Name(s) and Address(es) Air University Maxwell AFB, AL		Performing Organization Report Number
Sponsoring/Monitoring Agency Name(s) and Address(es)		Sponsor/Monitor's Acronym(s)
		Sponsor/Monitor's Report Number(s)
Distribution/Availability Statement Approved for public release, distribution unlimited		
Supplementary Notes		
Abstract		
Subject Terms		
Report Classification unclassified	Classification of this page unclassified	
Classification of Abstract unclassified	Limitation of Abstract UU	
Number of Pages 44		

Disclaimer

The views expressed in this academic research paper are those of the author and do not reflect the official policy or position of the US government or the Department of Defense. In accordance with Air Force Instruction 51-303, it is not copyrighted, but is the property of the United States government.

Contents

	<i>Page</i>
DISCLAIMER	II
PREFACE	IV
ABSTRACT	V
INTRODUCTION AND OVERVIEW	1
BACKGROUND	6
STRATEGIC CONSIDERATIONS	17
FACTORS AFFECTING THE RESPONSE DECISION	22
RECOMMENDATIONS	28
SUMMARY AND CONCLUSIONS	34
GLOSSARY	36
BIBLIOGRAPHY	37

Preface

In the last few years government leaders, academicians, and even the informed public have gotten serious about the increasing likelihood of a terrorist using a weapon of mass destruction, now ubiquitously known as WMD. Despite the growing concern, and financial investment, we have not done enough to prepare to face the potential use of WMD by terrorists against our citizens or allies overseas. I've written this paper in the hopes of helping address that shortfall.

I greatly appreciate the assistance and counsel of my faculty advisor, Col. Robert Sutton, and my former colleague at the State Dept., Thomas Lowe. Thanks, too, to Col. Tom Skillman for his encouragement. Finally, thanks go to my family for their ceaseless support.

Abstract

The purpose of this paper is to answer the following question. What factors should senior United States government officials be familiar with, and take into consideration, when making time-constrained decisions regarding the type and extent of a United States government response to a Chemical, Biological, Radiological or Nuclear (CBRN) event overseas? In determining these factors, the author researched salient books, periodicals, published and unpublished papers, and credible Internet sites. The author also conducted telephonic interviews and electronic mail exchanges with government officials in the fields of Weapons of Mass Destruction terrorism and Consequence Management. The author argues that the United States has developed significant CBRN response forces, but is hamstrung in projecting a timely response to an event overseas by a fragmented decision-making process at the strategic level. The author also proposes that national interests drive the decision to respond to a foreign nation's request for assistance, and that interests are based predominantly on political and economic concerns. After showing that an effective response must be a rapid one, the author calls for implementing a variety of preparations that together will dramatically reduce the response time. Recommendations offered to accelerate the response process include: educating senior decision-makers as to the absolute necessity for rapid action to minimize CBRN casualties, promoting the development of response capabilities in nations that currently lack the necessary assets, directing regional DOD airlift planners to develop load plans for equipment of regional responders, and formalizing the

decision-making role of the Counterterrorism Support Group in overseas Consequence
Management responses.

Chapter 1

Introduction and Overview

Most high officials leave office with the perceptions and insights with which they entered; they learn how to make decisions but not what decisions to make.

Dr. Henry A Kissinger

On August 7, 1998, a devastating explosion, caused by a terrorist truck bomb, destroyed the American Embassy in Nairobi, Kenya, killing 213 and injuring over 4000 people.¹ The echoes of the horrific blast had hardly faded before hundreds of emergency personnel and heroic citizens began searching for survivors by tearing at the twisted wreckage with any available tool, including just their bare hands.²

American assistance first arrived on the scene after 20 hours.³ U.S. medical trauma physicians and nurses with specialized equipment immediately began aiding relief workers.⁴ 200 FBI agents combed the crime scene, gathering evidence in an effort to identify the barbaric perpetrators.⁵

Strangely, despite the best efforts of expert medical personnel, nearly every blast survivor succumbed within a week, but not to their injuries. They all appeared to have suffered the incredible misfortune of contracting a severe case of influenza that preyed on their weakened immune systems.

However, emergency medics, Kenyan and American relief workers, and otherwise healthy FBI agents also caught the “bug”. Medical personnel were perplexed by the sudden flu epidemic on their hands, and they were particularly alarmed at the strain’s lethality—nearly 9 out of every 10 people displaying symptoms died within days!⁶

Although standard epidemiological protocols were followed, identification of the flu strain was discouragingly slow. It wasn’t until health officials noted that the only medical workers afflicted were the ones who physically visited the explosion site, that the suspicion arose that they were not dealing with a natural flu outbreak.

Since the pattern of the outbreak was atypical, epidemiologists began searching for other causes.⁷ Two days passed until anthrax was identified as the culprit. Another 36 hours slipped by while elements of the USMC Chemical-Biological Immediate Response Force (CBIRF) traveled to Nairobi and employed special sensors to map the extent of the anthrax-affected area.

A massive subsequent consequence management response was too late to save the vast majority of those exposed, which unfortunately included a great number of Kenya’s scarce medical professionals. When anthrax-induced symptoms presented themselves, all anyone could do was provide palliative care.⁸

The second set of FBI forensic experts, now sheathed in full level A protective suits with respirators⁹, collected enough evidence at the site to determine that the explosion not only decimated the U.S. Embassy, but acted as a dispersal means for an estimated kilogram of anthrax spores located in a fake exterior air conditioner on top of the delivery vehicle.

The light winds on that fateful morning kept the highest concentration of anthrax spores centered at what was the busiest intersection in Kenya’s capital. Now, the deadly levels of anthrax extend in a rough circle for nearly a kilometer from “ground zero”. Some experts

estimate remediation efforts will take years, and others claim the heart of Nairobi can never be made safe again for non-anthrax vaccinated individuals.

The first two paragraphs of the preceding introduction are fact. The subsequently paragraphs were fictitious, but could also have been just as real—had weaponized anthrax been a part of the terrorists’ monstrous plan. Neither Kenyan, nor American first responders were capable of testing for the presence of any biological or chemical contaminants at the site of the detonation.¹⁰

This paper is aimed at the highest levels of decision-makers in the United States government for two reasons. Why? First, because they are the ones who can ensure the necessary preparatory actions are completed to expedite future responses to overseas CM events.¹¹ And, as I intend to demonstrate, rapid response is imperative in saving lives and minimizing suffering. Second, without the type of knowledge contained herein, senior USG decision-makers will either delay the response process while they are “brought up to speed” (so they can make an informed choice), or they will abdicate the decision and rely on the inputs of experts outside of their agencies to make the necessary commitment of U.S. resources. Within our government, the Principals Committee (PC), comprised of the Secretaries of the Cabinet level agencies, is an appropriate body for this information, as it responsible for overseeing interagency crisis response.¹² Alternatively, the Deputies Committee (DC), composed of the Deputies from the self-same Cabinet agencies would be the next most desirable group to provide with these suggestions.¹³ Another governmental body that should be included is the group has the responsibility to make recommendations to the PC and/or DC—the Counterterrorism Support Group (CSG). Formerly known as the Coordinating Subgroup on Terrorism, the CSG is led by a National Security Council official.¹⁴

The difference in casualties in a CBRN incident because of timely and effective CM response can be nothing short of dramatic.¹⁵ It is because of that reason I have written this paper. After establishing a common framework of understanding by defining several key terms, I will explain why a timely response is so critical to an effective terrorist WMD response. Then, I will describe some existing impediments to that time-sensitive response and propose a variety of actions that, if implemented, could substantially improve the USG response to such a calamity.

Notes

1. "April 1999 State Department Actions to Accountability Review Boards (Africa Bombings)." n.p. On-line. Internet, 19 November 2000. Available from http://www.state.gov/www/regions/africa/arb/crisis_man.html.
2. James P. Denney and Paul M. Maniscalco, "Public Safety Agencies: Trying to Define Readiness While Surviving the Rhetoric." In *Hype or Reality: The "New Terrorism" and Mass Casualty Attacks*. Edited by Dr. Brad Roberts. Alexandria, Va. (Chemical and Biological Arms Control Institute, 2000), 261.
3. Phil Gunby, "US Military Medicine Responds to Results of Terror in Africa." *Journal of the American Medical Association* 280, no.10 (9 September 1998) 870.
4. Ibid.
5. "April 1999 State Department Actions to Accountability Review Boards (Africa Bombings)."
6. Frederick R. Sidell, William C. Patrick III, and Thomas R. Dashiell. *Jane's Chem-Bio Handbook* (Virginia: Jane's Information Group, 1998), 163.
7. Laurie Garrett, "The Nightmare of Bioterrorism." *Foreign Affairs* 80, no.1 (January/February 2001) 76-86.
8. Handout. United States Army Medical Research Institute of Infectious Diseases, *Anthrax*, Operational Medicine Division, Fort Detrick, Md. Undated.
9. Sidell, et al., 286-287.
10. Maj. Preston M. Plous, *Structuring the Force for Initial Response to International Consequence Management*, Research Report no. 99-163 (Maxwell AFB, Ala.: Air Command and Staff College, April, 1999), 6.

11. Ashton Carter, John Deutch and Philip Zelikow. "Catastrophic Terrorism: Tackling the New Danger." *Foreign Affairs* 77, no. 6 (November/December 1998): 80-94.
12. Presidential Decision Directive 1. Establishment of Presidential Review and Decision Series/ NSC. 20 January 1993.
13. Ibid.
14. Roberto Suro and Dana Priest, "White House Would Boost Anti-Terrorist Role of NSC," *Washington Post*, 24 March 1998.
15. Garrett, 78.

Chapter 2

Background

We must not be the unready, confronting the unthinkable.

Dr. Barry Schneider, Director
USAF Counterproliferation Center

Key Definitions.

“CBRN” refers to the type of substances that can be employed in “Weapons of Mass Destruction” (WMD) that can be particularly deadly and create mass casualties. The “C” stands for “Chemical”, “B” for “Biological”, “R” for “Radiological”, and “N” for “Nuclear”.

Consequence Management (CM). There are many definitions in use for the term “consequence management”. One definition, from a statement by Catherine H. Light, Director, Office of National Security Affairs, Federal Emergency Management Agency (FEMA) in June 1999, is that, “Consequence management addresses the effects of an incident on lives and property. It includes measures to protect public health and safety, restore essential government services, and provide emergency relief to governments, businesses, and individuals affected by a terrorist incident.” A different version comes from a DOD instruction, which states, “Consequence Management (CM). Comprises USG interagency assistance to mitigate damage resulting from the employment of a WMD.”¹ Yet another definition comes from the Department of State. It states, “Events involving contamination from a chemical, biological,

radiological or nuclear source that has the potential of creating catastrophic human casualties and generates a host nation request for international assistance. CBRN contaminants cause mass human casualties, requiring overwhelming emergency medical assistance. This is not trauma medicine. The host nation is in charge, overwhelmed, and asking for help from all sources.”² The intent of the State version is to be applied to a limited operation, whereas the domestic variety of CM includes cleanup and restoration.³

Generally, the overseas CM “phase” will only last a few days, while the remediation phase will carry on for weeks, months or years. In fact, for some disasters like the nuclear reactor accident at Chernobyl, remediation can continue for decades and cost *hundreds of billions* of dollars.⁴ Every incident is different, often lacking a clear demarcation between phases. Different phases can overlap and exist concurrently.⁵

Event Types. CBRN events are categorized by the type of contaminant causing the disaster and by the origin of the event.

Chemical. Chemical incidents can be caused by a solid, liquid or gas, which are further characterized as choking, blister or nerve agents.⁶ The time period they remain dangerous depends on the their volatility.⁷ “The less volatile an agent, the more persistent it is on the ground, foliage or on vehicles.”⁸ Some substances, like nerve agents, can cause death in minutes after exposure, while others’ effects may take hours to appear, as in the case of pulmonary or blister agents like mustard or phosgene.⁹ Nerve agents may have effective antidotes. Pulmonary agents do not.¹⁰

Biological. These agents are divided into four categories: bacteria, rickettsia, toxins and viruses.¹¹ Infected personnel are typically asymptomatic during the incubation period, which can last from hours to weeks.¹² The effects of biological agents cover the spectrum from temporary

incapacitation to painful death. While vaccines can prevent many infections and some biological agents respond well to treatment by antibiotics, certain viruses (like Ebola) and all the biotoxins have no effective treatment.¹³

Radiological. Incidents associated with radiation exposure from non-nuclear sources define radiological events. Days or weeks may pass before symptoms present themselves. Detecting radiological sources requires specialized equipment, as the materials have no odor or color.¹⁴

Nuclear. Nuclear events refer to both fission and fusion explosions.¹⁵ Both types create injuries through blast and heat effects, exposure to potentially high radiation at detonation and residual radiation exposure through fallout.¹⁶

Aside from the adjustment of response procedures based on the nature of the contaminant, events can also be characterized by their origin. *Terrorist* instigated incidents, like the sarin gas attack on the Tokyo subway in 1995, are treated differently than *industrial accidents*, such as the disaster in Bhopal, India in 1984, where thousands died after exposure to methyl isocyanate and hydrogen cyanide gases. The difference in the response lies in the additional element of military and/or police intervention in attempting to deter, apprehend, or neutralize the terrorists responsible.¹⁷ These efforts may be conducted concurrently with CM operations, or may even precede a CM mission, if the proper intelligence is available.¹⁸

Response Objectives. The primary CM response goal is to minimize casualties.¹⁹ To accomplish that goal, accurate and rapid initial assessment is crucial.²⁰ Identifying the contaminant is imperative in choosing the correct method of response.²¹ Despite the tendency to group all CBRN events under the same umbrella, the variety of problems (and appropriate responses) presented across the spectrum of CBRN possibilities demands that a determination of the actual contamination agent be accomplished as soon as possible. While radiological or

nuclear incidents can be rapidly identified with fairly rudimentary analysis, isolating the cause of multiple deaths and illness as having a chemical or biological origin is more problematic.²² This is true especially since certain agents are extremely contagious, current detection processes are slow and symptoms may not appear until the contagion has had an opportunity to become widespread.²³

Any coordinated CM response includes efforts to accomplish the following.

Casualty Mitigation. The first order of business is to save lives and reduce suffering.²⁴ Inherent in casualty mitigation is moving populations away from or out of the affected areas, parsing those that have been contaminated from those that are not (may involve splitting families), dividing those contaminated into categories (external, internal, fatal, treatable) conducting medical triage and providing medical treatment and prophylaxes for those requiring them.²⁵ Responders must also accomplish victim decontamination and preventing the contamination of the unaffected.²⁶

Security. Security personnel, whether HN military or civilian law enforcement, will establish site boundaries with U.S. or coalition aid and subdivide the affected area into “hot”, “warm”, and “cold” zones.²⁷ The hot zone encloses the immediate area of the contaminant source, and everyone within it must be wearing full personal protective equipment (PPE).²⁸ The warm zone, typically surrounding the hot zone (favoring upwind and uphill), is a transition area, where decontamination and initial medical triage occur.²⁹ Full PPE is still required within the warm zone.³⁰ The cold zone is uphill and upwind from the warm zone.³¹ Controlling the perimeter of the affected area is crucial in minimizing the creation of new casualties and protecting the crime scene.³² Travel into and out of the incident site must be restricted to prevent the spread of contaminants or disturbing evidence, order must be maintained to prevent panic and property

must be safeguarded to the extent feasible.³³ In general, unless the HN affected is strongly pro-Western, any security activities should be handled by the HN, or by friendly neighboring countries' forces, to minimize the risk of creating anti-US sentiment.

Public Affairs (PA). Minimizing the public panic that will accompany any serious CBRN incident is a primary goal of the robust public affairs plan that must be an integral part of any CM response. The PA plan must address the nature of the emergency, self-protection measures, the locations affected, evacuation routes and procedures, and other guidance from the government.³⁴ The plan should also include actions designed to ameliorate the many psychological effects of dealing with a potentially deadly substance that is often undetectable by normal human senses until a deadly dose has been absorbed and that may have caused many deaths of family, friends and other countrymen.³⁵

Restoring Essential Government Services. Examples of these services include: water, sewer, electricity, telephone, transportation, and access to safe food.³⁶

Restoring a Sense of Normalcy. This is the eventual goal of the CM response. Generally, all the aforementioned measures need to be successfully accomplished before the populace will experience a return to normalcy.³⁷ Depending on the nature of incident, this objective may not be achieved during the consequence management phase, waiting instead for some point during the long-term remediation phase, and secured by Non-Governmental Organizations (NGOs) and/or Private Voluntary Organizations (PVOs).³⁸

Current CM Response Process. Today there is no formally defined process for determining the U.S. response to OCONUS CM events.³⁹ Notionally, the consequence management process is conducted along the lines of the established counterterrorism process.⁴⁰ In that case, the U.S. Ambassador in the affected nation initiates a request for assistance through the Department of

State to the Counterterrorism Support Group (CSG).⁴¹ The CSG, in turn, determines a course of action and forwards it to the Principals Committee.⁴² This recommendation will be an *ad hoc* plan.⁴³ While various departments and agencies have developed their own guidance regarding participation in overseas consequence management, no specific guidance exists for the interagency process.⁴⁴ Once the PC or DC selects a COA, and prior to the deployment of forces, details of the U.S. plan must be presented to the HN government for approval.

A key issue is who is in charge. The host nation is ultimately responsible for the overall response in their country.⁴⁵ But the varying crisis and consequence management capabilities of the spectrum of potential target nations means the U.S. participants may be asked to play a variety of roles, anything from first responders to crisis managers in the HN emergency operations center.

Who runs the USG response? According to PDD-39, the US Department of State is the lead federal agency (LFA) for WMD response overseas not affecting the bases of US theater forces.⁴⁶ However, DOS does not control any response forces capable of assisting in a CM medical, security or infrastructure restoration response.⁴⁷ For years within DOS, some disagreement existed regarding roles and responsibilities in responding to overseas CBRN between the Secretary's Office of Counterterrorism (S/CT) and the Political-Military Bureau's office of International Security Operations (PM/ISO).⁴⁸ Members from S/CT head up the PDD-39 mandated Foreign Emergency Support Team (FEST), while PM/ISO is responsible for leading the Consequence Management Support Team (CMRT). The FEST, ostensibly intending to simplify response decisions, and to ensure no terrorist-initiated event goes undetected, intends to treat every non-battlefield CBRN event as terrorist-instigated.⁴⁹ Initially, the CMRT (which provides some personnel to the FEST) disputed the notion of treating every CBRN incident as

terrorist-related until proven otherwise. During a seemingly obvious industrial accident like a Chernobyl or Bhopal, they feared additional casualties due to delays in providing adequate medical assistance while awaiting the FEST's initial assessment.⁵⁰ Sometime later, CMRT managers recognized the need to implement a consistent response procedure. That idea grew out of the realization that state-sponsored terrorism or terrorist incidents by non-state actors may be designed to intentionally mimic industrial accidents to avoid attribution.⁵¹ However, the FEST is a limited national asset, focused on the crisis response nature of CT activities, and as a result, is not designed or organized to pursue the consequence management aspects of a CBRN incident, beyond the initial assessment.⁵² The CMRT was intended to lead the coordination of the USG CM response overseas, filling the gap between the crisis response of the FEST and the long-term remediation accomplished by the HN with assistance likely provided by NGOs and PVOs.⁵³ While developing its charter, the CMRT recognized that a major chemical or radiological industrial accident requires the same CM response as a terrorist-driven CBRN event, even if a full-fledged CT response is not required or performed.

CM Response is Not Humanitarian Assistance (HA). It is important to note how the response to a WMD/CBRN catastrophe varies from the response for a natural disaster, like floods or a hurricane.

- Timeliness of response can be more critical. The physiological effects of toxic chemicals or deadly contagions may limit the survival opportunity, even with proper treatment, to only a few hours.⁵⁴
- If the event is of biological origin, greater potential for an epidemic or even a pandemic exists. This situation is different from the conditions following earthquakes, floods, hurricanes,

etc., where an outbreak of disease is possible. The bioterror event begins with a rash of infections, for which there may not be any antidote or existing vaccines.

- A unfolding biological incident, with an overtaxed or ineffective medical response may be accompanied by rampant panic, as those in the area of the agent's spread wait in fear for any symptom to appear.⁵⁵

Responders may require the wear of PPE to prevent becoming victims themselves.⁵⁶ Unlike many HA operations immediately following natural disasters, responders entering a "Hot Zone" are definitely subjected to life-threatening exposure to any possible combination of radiation, toxins, and potentially deadly diseases. Response personnel will certainly be in harm's way, protected only by their PPE and specialized training.⁵⁷

Notes

1. Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3214.01. *Military Support to Foreign Consequence Management Operations*, 30 June 1998, 5.
2. Thomas J. Lowe, Consequence Management Program Manager, Political-Military Bureau, US Department of State, e-mail, subject: Paper, 18 January 2001.
3. Ibid.
4. Nicholas Lenssen and Christopher Flavin, "Meltdown," *World Watch*, May 1996. On-line. ProQuest, 5 February 2001.
5. Amy Smithson and Leslie-Anne Levy, *Ataxia, the Chemical and Biological Terrorism Threat and the US Response*, Stimson Center Report 35. (Washington, D.C.:Henry L. Stimson Center, 2000), 119.
6. Frederick R. Sidell, William C. Patrick III, and Thomas R. Dashiell. *Jane's Chem-Bio Handbook* (Virginia: Jane's Information Group, 1998), 140.
7. Ibid, 142.
8. Ibid, 141.
9. Ibid, 139-140.

10. Ibid.
11. Ibid, 157.
12. Ibid, 158-161.
13. Ibid.
14. Interagency Intelligence Committee on Terrorism, *Chemical/Biological/Radiological Incident Handbook*, 3.
15. Joint Publication (JP) 3-11, *Joint Doctrine for Operations in Nuclear, Biological, and Chemical (NBC) Environments*, 11 July 2000, I-3.
16. Ibid.
17. Thomas J. Lowe, "U.S. International Catastrophic Incident Response Plan," Draft. U.S. Department of State, Political-Military Bureau, Office of International Security Operations, 2000, 11.
18. Ibid.
19. Ibid, 13.
20. Maurice Eisenstein, *Bioterrorism: Homeland Defense Symposium: The Next Steps – An Executive Summary*. Rand Report CF-155/1, (Washington, D.C.:Rand Corporation, 2000), 15.
21. Eisenstein, 20.
22. Ibid.
23. Joint Publication (JP) 3-11, I-3,4.
24. Lowe, *Catastrophic Incident*, 11.
25. *Joint Doctrine for Operations in NBC Environments*, I-3,4.
26. Lowe, *Catastrophic Incident*, 13.
27. Sidell, et al., 28.
28. Ibid.
29. Ibid, 29.
30. Ibid.
31. Ibid, 30.
32. Ibid, 31.
33. Ibid, 24.

34. Eisenstein, 22.
35. Ibid.
36. Richard J. Rinaldo, "Consequence Management: Mother of All MOOTWS." *Common Perspective* 6, no. 1 (April 1998): 11-14.
37. Thomas J. Lowe, US Department of State, interviewed by author. 15 November 2000.
38. W. Seth Carus and Rebecca Hersman. "DOD and Consequence Management" *Strategic Forum* 169 (December 1999): 3.
39. Lowe, e-mail.
40. "April 1999 State Department Actions to Accountability Review Boards (Africa Bombings)," n.p.; on-line, Internet, 19 November 2000, available from http://www.state.gov/www/regions/africa/arb/crisis_man.html.
41. Lowe, *Catastrophic Incident*, 7-8.
42. Ibid, 19.
43. *April 1999 State Department Actions to Accountability Review Boards (Africa Bombings)*.
44. Lowe, e-mail.
45. *Military Support to Foreign Consequence Management Operations*, 2.
46. Presidential Decision Directive 39, *U.S. Policy on Counterterrorism*, 21 June 1995, unclassified version, n.p.; on-line, Internet, 2 February 2001, available from <http://111.fas.org/irp/offdocs/pdd39.htm>.
47. Lowe, e-mail.
48. Ibid.
49. Lowe, *Catastrophic Incident*, 7.
50. Lowe, Interview.
51. Ibid.
52. *April 1999 State Department Actions to Accountability Review Boards (Africa Bombings)*.
53. Lowe, e-mail.
54. Smithson and Levy, 124-125.
55. Laurie Garrett, "The Nightmare of Bioterrorism," *Foreign Affairs* 80, no.1 (January/February 2001) 76-86.
56. Sidell, et al, 11.
57. Lowe, *Catastrophic Incident*, 16.

Chapter 3

Strategic Considerations

Strategy is a process, a constant adaptation to shifting conditions and circumstances in a world where chance, uncertainty and ambiguity dominate.

Williamson Murray and Mark Grimsley

Many experts have bemoaned the lack of focused guidance from the USG as to the domestic side of the CBRN response equation.¹ Taking into consideration the U.S. focus on domestic homeland defense, the situation is undoubtedly worse on the overseas side. Detractors fault the USG for a lack of an overarching strategy to guide decision-making.² Guidance should come from the National Command Authority (NCA) through the National Security Strategy and related documents. Such direction should include:

- Guidance on overall strategy (equivalent to “commander’s intent”).
- Viewpoint of what constitutes proper application of existing capabilities.
- Guidelines for future requirements.

The USG response will be tempered by the perceptions of the senior leaders as to the type of “national interest” the situation represents: vital, important or humanitarian. At the most basic level, the USG has an interest in every CBRN disaster because of our humanitarian nature. However, the CBRN situation can rise to the level of national or even vital interests depending on the particular circumstances surrounding the event. For example, a large scale CBRN

disaster, if imposed in a small, poor country...or one with a unsteady government, will likely cause widespread unrest, panic and dissatisfaction with the ruling government, perhaps to the extent it collapses or is overthrown.³ Also, any catastrophic CBRN incident (defined here as causing significant casualties and affecting a large city) could lead to the creation of a tidal wave of humanity fleeing the stricken city that would overwhelm the response capabilities of its neighboring countries.⁴ This refugee armada could cause the kind of destabilization already feared by many of Europe's more modern nations, and as such, could be characterized as a vital US interest because that category includes "...the physical security of our territory and that of our allies."⁵

Political. These considerations exist both internationally and domestically.

- International examples. Certain countries don't want U.S. involvement or USG personnel in their country, meaning an offer of assistance may be refused.⁶ Also, cultural differences may inhibit friendly governments from allowing any perceived interference in their internal affairs. The Japanese government, specifically the Tokyo police, chose not to share information over the Aum Shinrikyo Cult's activities prior to their deadly nerve gas attack in Japan.⁷ Another, more recent instance occurred during the Tokai nuclear criticality accident in September 2000, where the Japanese government refused offers of technical aid and were slow to release information.⁸

- Domestically, one might anticipate veiled opposition from U.S. politicians and leaders if the USG were to respond to an event in Iraq or North Korea, for example--or anywhere outside of our major partners nations without a developed coalition first.⁹ In addition, if we were to move critical pharmaceuticals from our domestic stockpile to outside our borders, and then open ourselves to shortfalls in support, there would be definite political ramifications.¹⁰

- The USG will need to allow its personnel employed in CM response to operate under the control of the HN. That issue will need to be addressed and guidelines provided by the NCA, as part of the response decision.

Economic: How much is enough to spend? \$10 M, \$100M, \$1B? Of course, each situation carries a different price tag. Leaders will make budgetary decisions based on a number of factors. What is the relationship between the United States and the affected nation? How severe is the catastrophe? Are other countries capable of assisting? What is the state of the U.S. economy? Is this the first incident of late, or the third? Keep in mind, the U.S. spent \$645 million alone on counterterrorism in FY98 and is projected to spend another \$1.6 billion in FY01.¹¹ Yet, by virtually all accounts there is still much to be done domestically before we can say we are ready to respond to a major CBRN event.

Success in defining economic strategy will arise from establishing limited, clear goals, with a logical end state in mind.

Geographic: Distance = time = casualties. In a distant country with very limited response capabilities (having only simple fire and police response with no HAZMAT skills), if there is no regional prepositioning of supplies, and the agent is a non-persistent chemical, the USG response will be limited in effectiveness.¹² Since first response for non-persistent chemicals will not be possible, the USG may initially only be able to provide body bags, mortuary assistance, and forensics support due to the dissipation of the agent before the U.S. responders can arrive.¹³

US National Security Concerns: In an environment of potentially multiple attacks at multiple locations, do we offer up our limited response assets and leave our forces/personnel more vulnerable? Our generosity will need to be weighed against our own security. Top flight

intelligence can provide useful risk assessments to help guide the decision on how much aid to provide in response to a request for assistance following an overseas CBRN event.

Reasonable expectations of success? Similar in respects to the Geographic concern, do we commit our limited resources if we know all they can accomplish is clean-up? That is, if the CM phase is over, and long-term remediation is underway, is there sufficient value in deploying our CM forces? Politically, it would be unrealistic to completely ignore a plea for aid, but the response will be tempered by the existing circumstances.

Whatever we determine our expectations to be, we must share them with the HN, and note their expectations of us to avoid any confusion and misunderstanding.

Culturally: USG government officials, outside of the DOS country team, are sometimes unfamiliar with the concerns of the affected HN. The employment of USG medical personnel who are regionally based will not only reduce the response time, but with the proper emphasis on appropriate cultural training, lead to a better understanding of potential cultural clashes with the proper handling of victims from countries with different modesty/religious values.¹⁴

Notes

1. John G. Roos, "Who's In Charge?" *Armed Forces Journal International*, September 1999, 44-48.
2. General Accounting Office, *Combating Terrorism: Opportunities To Improve Domestic Preparedness Program Focus and Efficiency*. Letter Report, (12 November 1998).
3. "A National Security Strategy for a New Century," The White House, Washington, D.C. December 1999, n.p.; on-line. Internet, 11 December 2000, available from <http://www.usinfo.state.gov/regional/ea/ecsec/natsec2k/htm>.
4. Ibid.
5. Ibid.
6. Thomas J. Lowe, US Department of State, interviewed by author. 15 November 2000.

7. Senate, *1995 Global Proliferation Of Weapons Of Mass Destruction: A Case Study On The Aum Shinrikyo: Hearings Before the Permanent Subcommittee On Investigations*, 31 October 1995, n.p.; on-line, Internet, 5 February 2001, available from <http://www.best.com/~hansen/DrPseudocryptonym/aumcult.txt>
8. Thomas J. Lowe, Consequence Management Program Manager, Political-Military Bureau, US Department of State, e-mail, subject: Paper, 18 January 2001.
9. Ibid.
10. W. Seth Carus and Rebecca Hersman. "DOD and Consequence Management" *Strategic Forum* 169 (December 1999):1-4.
11. Amy Smithson and Leslie-Anne Levy, *Ataxia, the Chemical and Biological Terrorism Threat and the US Response*, Stimson Center Report 35. (Washington, D.C.:Henry L. Stimson Center, 2000), 122.
12. Lowe, e-mail.
13. Ibid.
14. Ibid.

Chapter 4

Factors Affecting the Response Decision

Minutes of delay make the difference between a rescue operation and a body bag detail.

General Charles E. Wilhelm, USMC
Commander in Chief, U.S. Southern Command

Understanding the key factors that affect every CM response to a CBRN catastrophe will allow decision-makers to make more informed choices. Additionally, that understanding should help expedite the process by obviating the need to have the rationale behind their staffs' recommended COAs explained. The following factors should be considered in developing any CBRN disaster response.

Time. The single most important factor in minimizing the casualties of a CBRN event is time. Along with the concentration of the agent, time in contact with a contaminant determines the amount of chemical or radiological exposure.¹ Reducing the time of exposure can mean the difference between being subjected to a fatal dose or not, whether it be total radiation dose, quantity of chemical agent or toxin, or number of bacteria/virus particles.² Time elapsed between exposure and treatment can also be a “live or die” determinant. An antidote to a lethal dose of a nerve agent like sarin must be administered within seconds, while anthrax can be treated effectively with antibiotics up to several days following exposure, as long as those exposed have not yet begun to exhibit symptoms.³ Another measure of time must be considered when evaluating alternate response options,

and that is expected duration of the response mission: Can the USG afford to have valuable and limited assets engaged for weeks? What kind of staying power, based on logistical requirements and available support, do they have? Should the same units stay in place for the duration of the CM phase until remediation begins and recovery efforts can be handed over to NGOs and PVOs?

Distance. Despite the large area covered by the United States, the distances between potential domestic CBRN incident sites and response forces are manageable, thanks to a highly developed transportation infrastructure. The same is not true for many potential destinations overseas. For example, USG personnel responding to the Embassy bombings in Africa faced flight times alone of nearly 18 hours from the CONUS, and even 11 hours from central Europe.⁴ This did not include extra time needed for recalling personnel, processing and loading.

Personnel. Responders must be trained, equipped, and available. Medical personnel trained in the treatment of individuals exposed to chemical, biological, or radiological contaminants are essential, not only because of their ability to treat the affected, but because they can operate in a contaminated environment without becoming victims themselves. U.S. response forces and equipment, especially outside the continental United States (OCONUS), are limited.⁵ The specialized response forces the U.S. maintains OCONUS are military assets, and fall under the control of the commanders in chief (CINCs) of the existing five regional commands.⁶ These regional CINCs are not provided sufficient funding to allow a force structure supporting multiple CBRN response teams.⁷ Another real concern is the training deficiencies of host nation officials in CBRN disaster response.⁸ During the last ten years, nationwide emphasis in the US on the growing domestic threat of CBRN events spawned a panoply of training opportunities for city officials, incident commanders, and

first responders. Much of the training was provided by and paid for by the USG, which has invested billions of dollars over the last five years in countering the *domestic* WMD threat.⁹ Such training is rare in other countries and therefore raises the specter of well-intentioned, but incompetent, officials trying to employ untrained response forces (civilian or military) to respond to a major CBRN crisis that would overwhelm virtually any response force. In an urban environment, such an unfavorable combination would lead inevitably to masses of unnecessary additional casualties.

Airlift. There are two central requirements for a successful USG response to an overseas CBRN event: properly trained medical personnel and airlift.¹⁰ Without appropriate medical personnel, the most critical life-saving measures cannot be disseminated throughout the medical system of the HN.¹¹ Without airlift, the medical personnel cannot arrive in a timely manner, nor can other response personnel be brought into a nearby airfield for the CM effort.¹² In fact, there may be occasions where the USG's most valuable contribution is using DOD's airlift to transport the emergency response personnel of another country to the disaster location.

Such "just in time" response is heavily dependent on responsive and flexible airlift (capable of landing at austere airfields in poor weather). For example, a radiological dispersal device detonated in Athens could require the expertise of a Polish radiological response unit...one the Polish government would be willing to send, but constrained from doing so by the limited airlift they have available. An immediate retasking of a "target of opportunity" C-17 in theater could help provide an important response capability that otherwise would be missing or delayed. Such a capability requires certain types of preconditions addressed elsewhere in this paper.

Weather. Inclement meteorological conditions at the departure or arrival airfields for a response team could delay or prevent a response, and could make a response from a more distant location necessary or desirable. For example, ice storms in Central Europe could ground aircraft in Germany and prevent a timely regional response to an incident in Spain. Weather conditions also impact the nature of the disaster itself. Rain can wash away some contaminants.¹³ On the other hand, a temperature inversion can help trap contaminants close to the surface, and increase the density of the agent.¹⁴

Media and Public Affairs. An aggressive public affairs program is absolutely mandatory to minimize the inevitable chaos and panic following a CBRN event.¹⁵ The HN will be responsible for notifying the media and providing updates in accordance with whatever media plan they create. Not every nation has the same free press history as the U.S., and USG personnel supporting the CM response will need to refrain from indiscriminate information sharing with the media. Additionally, USG officials in the U.S. who are privy to updates from deployed USG personnel need to limit their explanations to the American media. Because of the near instantaneous nature of today's global news cycle, U.S. officials offering information in Washington DC could unintentionally undermine the intentions of the HN by releasing information the HN wished withheld. However, lack of media coverage due to blackout or slow recognition of the extreme gravity of the situation should not affect planning of the USG response.

Legal Issues. There is no guarantee that USG participation in an overseas CM response will save lives. What liability will exist if USG responders provide incorrect medical information or treatment, and the HN turns from initial gratitude to frustrated finger pointing? Are there any international laws or US laws that prohibit certain activities or actions in CBRN emergency situation?

Other Limiting Conditions. What conditions limit the scope of the US response? (Keeping in mind that nature of the CBRN event will dictate certain limits, i.e., particular types of contaminants require more expeditious treatment than others. A biological event, unless the perpetrators announce their actions, will not normally be detected in the early phases.¹⁶ In fact, unless biodetectors are deployed at the site as an alarm system, and the bio agent employed is one not genetically altered to avoid detection or treatability, the bioattack will not be recognized until many have suffered, possibly died, and may have spread the contagion.)¹⁷

Notes

1. Joint Publication (JP) 3-11, Joint Doctrine for Operations in Nuclear, Biological, and Chemical (NBC) Environments, 11 July 2000, B-3.
2. Ibid, III-6.
3. Laurie Garrett, "The Nightmare of Bioterrorism," *Foreign Affairs* 80, no.1 (January/February 2001) 78.
4. Maj. Preston M. Plous, Structuring the Force for Initial Response to International Consequence Management, Research Report no. 99-163 (Maxwell AFB, Ala.: Air Command and Staff College, April, 1999), 5.
5. Joint Doctrine for Operations in NBC Environments, 5.
6. Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3214.01. Military Support to Foreign Consequence Management Operations, 30 June 1998, A-4.
7. W. Seth Carus and Rebecca Hersman. "DOD and Consequence Management" *Strategic Forum* 169 (December 1999): 4.
8. Thomas J. Lowe, Consequence Management Program Manager, Political-Military Bureau, US Department of State, e-mail, subject: Paper, 18 January 2001.
9. Amy Smithson and Leslie-Anne Levy, Ataxia, the Chemical and Biological Terrorism Threat and the US Response, Stimson Center Report 35. (Washington, D.C.:Henry L. Stimson Center, 2000), 119.
10. Lowe, e-mail.
11. Ibid.

12. Ibid.
13. Joint Doctrine for Operations in NBC Environments, C-3.
14. Ibid.
15. Maurice Eisenstein, *Bioterrorism: Homeland Defense Symposium: The Next Steps – An Executive Summary*, Rand Report CF-155/1, (Washington, D.C.:Rand Corporation, 2000), 22.
16. Eisenstein, 14.
17. Ibid.

Chapter 5

Recommendations

It is not acceptable to exchange business cards for the first time at the site of a disaster.

Admiral Frank Young
Director, Office of Emergency Preparedness

As of this writing, the United States has not yet been asked to assist in a consequence management response to an actual CBRN calamity overseas. However, if that day arrives before we have fully prepared to render aid, we will regret it. The recommendations I present here are neither extremely difficult to implement, nor prohibitively expensive when considering the potential toll in lives and treasure. By adopting them, the USG can maximize its investment in OCONUS CM response, and simultaneously pursue its global engagement strategy.

Expand Regional Engagement Strategy. The criticality of a timely response to a CBRN event, and the limitations on USG personnel and equipment drive the need to foster CBRN response capabilities regionally, in nations that can provide the trained personnel and equipment.¹ The Department of State is already pursuing such engagement in a two-tiered fashion.² The Secretary's Office of Counterterrorism is providing training to "have not" nations—those without an existing CBRN response capability.³ DOS's Political-Military Bureau is working at developing a web of regional responders from the "haves", nations already possessing CBRN response assets.⁴ This process must continue with expanded emphasis by senior DOS officials and more robust funding to court the "haves", who will have the most positive effects in their own regions.

Such “coalition-building” of regional CBRN assets is organizationally best managed by the United Nations because of the UN’s experience in organizing and managing peacekeeping and humanitarian assistance forces. However, until the UN is in a position to assume responsibility for such a program, the United States must assert its leadership and show the way. This type of international engagement meshes neatly with current foreign policy and security goals.

Although the United Nations would seem to be in an ideal position to manage a globally trained, regionally responding CM response force, the UN’s involvement is not likely to occur until a serious CBRN event has beset a major international city. Perhaps only then will the affected country, plus those that fear the possibility of being struck in the future, become willing to commit CM response forces to an international, regional response team even if it degrades their domestic capabilities. It will be a worthwhile tradeoff to gain the support of other like-minded nations.

Revise the Process. An effective, responsive process will need to include all potential USG response agencies and have all those contributors understand when and where to make their inputs, and who has the authority to make decisions and commit resources for the USG.⁵ All the deployable responders need to develop complete load plans for the range of possible DOD and commercial transport aircraft. The process should include an “action officer” Planning Group (PG) of subject matter experts to develop COAs to forward to the CSG for an implementation decision.⁶ As the lead federal agency for overseas CBRN events, DOS would chair the PG.⁷ The PG concept has already been tested experimentally during the USG response to a minor nuclear accident in Japan in February 2000.⁸ Once the “process” is approved, it needs to be written and available, to provide continuity despite the frequent changing of decision-makers and to minimize the effects of personalities on the process.

Because of the breakout possibilities associated with such highly contagious biological agents, it may be prudent to treat all potential chem/bio incidents as biologically based until

otherwise confirmed as only chemical in nature. An appropriate interim response would include limits on travel, enhanced border crossing restrictions, closing airports except for inbound emergency responders, initiation of public health related quarantine measures, and notifications to all neighboring countries (and those to which aircraft had flown from the affected nation.)⁹ All reasonable efforts must be taken to limit the spread of a virulent contagion. If the USG provides stockpiled pharmaceuticals from prepositioned regional stocks, those stocks must be immediately replenished from the CONUS, to maintain the warfighting capabilities of the regional CINC's forces.

Accelerate Airlift. To most expeditiously take advantage of “airlifters of opportunity” in the time-critical effort to minimize fatalities, three actions need to be completed. First, AMC and the regional CINCs (who control their own limited transport aircraft) need to be advised by the NCA that upon notification of a CBRN event overseas, respective headquarters would be required to locate potential airlift assets in theater for immediate retasking. Missions to support the transport of CM responders would be assigned the highest available priorities. Second, DOS and DOD must make the necessary arrangements ahead of the need to put this program in action to work out the payment options, i.e., who will foot the bill?¹⁰ While not a showstopper, having a DOS request for airlift assistance go through an expedited “memorandum of understanding” process may still cause unnecessary delay. Third, airlift planners need to interface with the organizations of the potential coalition responders identified by DOS to develop load plans for the variety of USG airlift aircraft to reduce response times. This planning would include identifying the materiel that cannot be safely air transported or that requires special handling or packaging.

Focus Exercises and Expand Training. WMD related exercises have been a DOD staple for several years.¹¹ However, the emphasis has almost uniformly been directed at prevention of a WMD event—which is a counterterrorism function.¹² These exercises shortchange the CM phase.

The complexities and challenges of consequence management actions and coordination warrant exercises focused specifically on CM.

Expedite the Overall Response. These recommendations are intended to be means of expediting the CBRN response selected by the USG. Since a medical response element is going to be a vitally important, if not the most important component of any CBRN response, a medical component must be part of the response immediately following the initial assessment team.¹³ One way to accomplish this is to have a specialized medical response element deploy two hours behind the FEST.

- This element would be trained in all aspects of a CBRN medical response.
- The unit could be launched “on warning” as in the former days of Strategic Air Command bombers on alert. If, while enroute, the FEST leader determines the incident is a false alarm, the aircraft would return to its departure location. The requirement for a rapid response overrides the resources expended in an occasional false alarm situation. The additional two hours would make it easier for AMC to provide an aircraft for the deployment. Of course, if the response is limited to USG assets, the best response would be from a medical team provided by the regional CINC.

Deploying such a limited asset would raise the CINC’s concerns about protecting his own forces. How do we reduce our vulnerability in theater following the deployment of the regional CINC’s CM assets in response to a foreign government’s request? Automatically triggered deployments of backfill units from the US would shrink our window of exposure.

For example, a chemical attack in Dar es Salaam would trigger a EUCOM response. As soon as notified of the event, EUCOM would determine which assets would respond and assign a follow-on medical team (perhaps with an air transportable hospital that has special equipment loaded for a CBRN event).¹⁴

EUCOM would also assign CINC logisticians to find and retask the airlift asset that has the highest probability of delivering the necessary equipment with the least amount of time passing from the incident occurring. This will not always be the fastest aircraft. If a slower aircraft is available significantly sooner than a faster aircraft, because of its presence at/near the site of response teams, then the slower aircraft should be used if it will deliver the teams with less elapsed time from initial notification.

In response to a nuclear or radiological event, sending the airlift aircraft with an augmented crew would allow for the immediate evacuation of non-affected or decontaminated USG employees and dependents.¹⁵

EUCOM should also immediately request a backfill from CONUS units that have the same capabilities as those deployed to the disaster site. If warranted, additional follow-on response forces could be sent directly from the U.S. to the incident site, assuming adequately trained and equipped forces are available.

When in possession of specific intelligence information suggesting a CBRN terrorist attack, the USG should forward deploy CM response forces.

Those governments smart enough to “know what they don’t know” will also ask for help in managing the crisis at the top levels of the host nation’s government.¹⁶ Some smaller countries have already suggested to U.S. diplomatic officials, that if ever struck by a CBRN event, they would ask the U.S. to manage their entire response effort.¹⁷ In those countries whose leaders aren’t wise enough to “know what they don’t know”, the proposed USG response must include an offer to assist in the management of the crisis.

Notes

1. Presidential Decision Directive 56, “Managing Complex Contingency Operations,” May 1997, 1-5

2. Thomas J. Lowe, US Department of State, interviewed by author. 15 November 2000.
3. Ibid.
4. Ibid.
5. *Managing Complex Contingency Operations*, 2.
6. Lowe, interview.
7. Ibid.
8. Ibid.
9. Maurice Eisenstein, *Bioterrorism: Homeland Defense Symposium: The Next Steps – An Executive Summary*. Rand Report CF-155/1, (Washington, D.C.:Rand Corporation, 2000), 16.
10. “April 1999 State Department Actions to Accountability Review Boards (Africa Bombings),” n.p; on-line, Internet, 19 November 2000, available from http://www.state.gov/www/regions/africa/arb/crisis_man.html.
11. Richard J. Rinaldo, “Consequence Management: Mother of All MOOTWS,” *Common Perspective* 6, no. 1 (April 1998): 13.
12. Thomas J. Lowe, “U.S. International Catastrophic Incident Response Plan,” Draft. U.S. Department of State, Political-Military Bureau, Office of International Security Operations, 2000, 13.
13. James P. Denney and Paul M. Maniscalco, “Public Safety Agencies: Trying to Define Readiness While Surviving the Rhetoric.” In *Hype or Reality: The “New Terrorism” and Mass Casualty Attacks*. Edited by Dr. Brad Roberts. Alexandria, Va. (Chemical and Biological Arms Control Institute, 2000), 259.

Chapter 6

Summary and Conclusions

Life is the art of drawing sufficient conclusions from insufficient premises.

Samuel Butler
English author, 1835-1902

If we accept, as do so many experts, that the possibility of a terrorist's use of a CBRN weapon is not an idle threat, then it behooves us to be prepared.¹ Regardless of how we approach the problem, the bottom line is about saving and healing lives.

In this paper I've attempted to present the core information that will assist senior level decision-makers in rapidly selecting the most appropriate COA provided them by their planning staffs in determining the USG response to a CBRN catastrophe overseas. My focus has been on identifying the issues that most impact that bottom line. By showing how vital a speedy response is in limiting the number of casualties, I highlighted the importance of saving time at every opportunity in the response process.

After reviewing that process and the issues that go into the formulation of the response proposals, I put forth a number of suggestions to shave critical hours and minutes from the time of the incident until specialized responders arrive on the scene. Those recommendations included formalizing the existing *ad hoc* response process by publishing written guidance on the responsibilities of the planners and deciders of the PG, CSG and DC or PC. Several ideas centered on ways to reduce the airlift response time, to include completing load planning ahead of

notification, developing regional response capabilities, and precoordinating the transport on coalition partners chem/bio teams. Reiterating a theme forwarded by many, I call for a realistic training and exercise program to help eliminate “the fog of war” before these concepts are drawn upon for real.²

Perhaps individually, each of these proposals will yield only incremental improvements in the timeliness of the USG’s response, but I contend that together they will yield a significant benefit. Further, I argue that examining the key facets of an appropriate U.S. CM response, then pairing them with reasonable, actionable, synergistic, and above all, implemented recommendations is the best way to constructively develop the viable OCONUS CM capability we fervently hope to exercise, but never employ.

Notes

1. W. Seth Carus and Rebecca Hersman. “DOD and Consequence Management” *Strategic Forum* 169 (December 1999):1-4.
2. Gail Kaufman, “Hamre: Domestic Chem-Bio Attack Is Not DOD’s Problem To Solve.” *Inside Defense.com*, 29 November 2000, n.p.; on-line, Internet, 30 November 2000, available from <http://ebird.dtic.mil/Nov2000/s20001130hamre.htm>.

Glossary

AMC	Air Mobility Command
AU	Air University
AWC	Air War College
CBRN	Chemical, Biological, Radiological, and Nuclear
CINC	Commander-in-Chief
CM	Consequence Management
CMRT	Consequence Management Response Team
CT	Counterterrorism
DC	Deputies Committee
DOD	Department of Defense
DOS	Department of State
EUCOM	European Command
FEST	Foreign Emergency Support Team
HN	Host Nation
LFA	Lead Federal Agency
NCA	National Command Authority
NGO	Non-Governmental Organization
OCONUS	Outside the CONTinental United States
PC	Principals Committee
PDD	Presidential Decision Directive
PHS	Public Health Service
PM/ISO	Political-Military Bureau Office of International Security Operations
PPE	Personal Protective Equipment
PVO	Private Volunteer Organization
USAF	United States Air Force
USG	United States Government
USMC	United States Marine Corps
WMD	Weapons of Mass Destruction

Bibliography

- “A National Security Strategy for a New Century.” The White House, Washington, D.C., December 1999, n.p. On-line. Internet, 11 December 2000. Available from <http://www.usinfo.state.gov/regional/ea/ecsec/natsec2k/htm>.
- “April 1999 State Department Actions to Accountability Review Boards (Africa Bombings).” n.p. On-line. Internet, 19 November 2000. Available from http://www.state.gov/www/regions/africa/arb/crisis_man.html.
- Carus, W. Seth, and Rebecca Hersman. “DOD and Consequence Management” *Strategic Forum* 169 (December 1999):1-4.
- Carter, Ashton, John Deutch and Philip Zelikow. “Catastrophic Terrorism: Tackling the New Danger.” *Foreign Affairs* 77, no. 6 (November/December 1998):80-94.
- Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3214.01. *Military Support to Foreign Consequence Management Operations*, 30 June 1998.
- Denney, James P., and Paul M. Maniscalco. “Public Safety Agencies: Trying to Define Readiness While Surviving the Rhetoric.” In *Hype or Reality: The “New Terrorism” and Mass Casualty Attacks*. Edited by Dr. Brad Roberts. Alexandria, Va. Chemical and Biological Arms Control Institute, 2000.
- Eisenstein, Maurice. *Bioterrorism: Homeland Defense Symposium: The Next Steps – An Executive Summary*. Rand Report CF-155/1. Washington, D.C.:Rand Corporation, 2000.
- Garrett, Laurie. “The Nightmare of Bioterrorism.” *Foreign Affairs* 80, no.1 (January/February 2001) 76-86.
- General Accounting Office. *Combating Terrorism: Opportunities To Improve Domestic Preparedness Program Focus and Efficiency*. Letter Report, 12 November 1998, GAO/NSIAD-99-3.
- Gunby, Phil. “US Military Medicine Responds to Results of Terror in Africa.” *Journal of the American Medical Association* 280, no.10 (9 September 1998) 870-871.
- Handout. United States Army Medical Research Institute of Infectious Diseases. *Anthrax*. Operational Medicine Division, Fort Detrick, Md. Undated.
- Interagency Intelligence Committee on Terrorism. *Chemical/Biological/Radiological Incident Handbook*. 1998.
- Joint Publication (JP) 3-11. *Joint Doctrine for Operations in Nuclear, Biological, and Chemical (NBC) Environments*, 11 July 2000.
- Kaufman, Gail. “Hamre: Domestic Chem-Bio Attack Is Not DOD’s Problem To Solve.” *Inside Defense.com*. 29 November 2000. On-Line. Internet, 30 November 2000. Available from <http://ebird.dtic.mil/Nov2000/s20001130hamre.htm>.
- Lenssen, Nicholas and Christopher Flavin. “Meltdown.” *World Watch*, May 1996. On-line. ProQuest, 5 February 2001.
- Lowe, Thomas J. Consequence Management Program Manager, Political-Military Bureau, US Department of State, e-mail, subject: Paper, 18 January 2001.

- Lowe, Thomas J. "U.S. International Catastrophic Incident Response Plan." Draft. U.S. Department of State, Political-Military Bureau Office of International Security Operations. 2000.
- Michalovich, Michial M. "Consequence Management 101: Forming and Deploying a Joint Task Force for Consequence Management." *Marine Corps Gazette* 84, no.9 (September, 2000): 36-42.
- Plous, Maj. Preston M. "Structuring the Force for Initial Response to International Consequence Management." Research Report no. 99-163. Maxwell AFB, Ala.: Air Command and Staff College, 1999.
- Presidential Decision Directive 1. Establishment of Presidential Review and Decision Series/ NSC. 20 January 1993.
- Presidential Decision Directive 39. U.S. Policy on Counterterrorism. 21 June 1995. Unclassified version. n.p. On-line. Internet, 2 February 2001. Available from <http://111.fas.org/irp/offdocs/pdd39.htm>.
- Presidential Decision Directive 56. Managing Complex Contingency Operations. May 1997.
- Rabkin, Norman J. *Testimony Before the House Subcommittee on Oversight, Investigations, and Emergency Management, Committee on Transportation and Infrastructure*, 6 April 2000. n.p. On-line. Internet, 11 December 2000. Available from <http://www.house.gov/transportation/oversight/04-06-00/rabkin.html>.
- Rinaldo, Richard J. "Consequence Management: Mother of All MOOTWS." *Common Perspective* 6, no. 1 (April 1998): 11-14
- Roos, John G. "Who's In Charge?" *Armed Forces Journal International*, September 1999, 44-48.
- Sidell, Frederick R., William C. Patrick III, and Thomas R. Dashiell. *Jane's Chem-Bio Handbook*. Virginia: Jane's Information Group, 1998.
- Smithson, Amy and Leslie-Anne Levy. *Ataxia, the Chemical and Biological Terrorism Threat and the US Response*. Stimson Center Report 35. Washington, D.C.:Henry L. Stimson Center, 2000.
- US Department of State. *Summary of the U.S. Department of State Strategic Plan*. Washington DC. January, 2000. On-line. Internet, 30 January 2001. Available from http://www.state.gov/global/general_foreign_policy/2000_dos_stratplan_body.pdf.
- US Senate. *1995 Global Proliferation Of Weapons Of Mass Destruction: A Case Study On The Aum Shinrikyo: Hearings Before the Permanent Subcommittee On Investigations*. 31 October 1995. n.p. On-line. Internet, 5 February 2001. Available from <http://www.best.com/~hansen/DrPseudocryptonym/aumcult.txt>.
- Washington Post*, 24 March 1998.